

ARRANGEMENT FOR EMULATING AN UNLIMITED NUMBER OF IP DEVICES WITHOUT ASSIGNMENT OF IP ADDRESSES

ABSTRACT OF THE DISCLOSURE

A protocol emulator includes an executable emulation application configured for promiscuously detecting IP frames on a network interface. The executable emulation application generates response IP frames for each corresponding detected IP frame. The protocol emulator also includes a raw socket configured for outputting each response IP frame onto the network interface.

5 Hence, the protocol emulator minimizes use of UNIX kernel resources by eliminating IP filtering of received IP frames from the network interface, and by using a raw socket for sending a response IP frame generated by the emulation application instead of the socket layer or the kernel. Hence, the minimal use of UNIX kernel resources enables scalable emulation of multiple logical IP addresses, effectively enabling an unlimited number of IP devices to be emulated without assignment of IP
10 addresses to respective sockets.